

SOUTH ASIA'S LARGEST POWER CONTROL COMPANY



REDUCE FAILURE RATE OF ELECTRICAL EQUIPMENTS  
&  
**SAVE ENERGY**  
BY INSTALLING

## JINDAL'S INDUSTRIAL ROBOT AUTOMATIC VOLTAGE CONTROLLER

A breakthrough in energy conservation



CAPACITY : 30 TO 100 KVA



CAPACITY : 150 TO 3500 KVA

### GENERAL TREND OF VOLTAGE DURING DAY TIME

340V-400V

09:00 HRS. - 12:00 HRS.

400V-440V

12:00 HRS. - 14:00 HRS.  
Lunch Hours

340V-400V

14:00 HRS. - 18:00 HRS.

400V-430V

18:00 HRS. - 22:00 HRS.  
Peak Hours Restriction

400V-470V

22:00 HRS. - 05:00 HRS.

400V-450V

05:00 HRS. - 09:00 HRS.

NOTE : We can provide you the computerized printout of voltage variation at your premises by installing the Data Loggers.

## Introduction

**JINDAL'S** are manufacturing Automatic Voltage Controllers (AVC) & Rectifier Equipments for Electroplating / Hydrogenation and also Special Purpose Transformers for industrial applications since 1967.

We have supplied more than 17000 Automatic voltage controllers / Rectifiers above 100 KVA capacity to different type of industries / reputed corporate houses throughout India as well as few outside India. As per customers feedback received, they have confirmed the advantages after installation of stabilizers and placed repeat orders. The equipment is the need of every power consumer.

## Industrial Robot

Automatic voltage controller is an industrial robot which continuously monitors the voltage variation round the clock & whenever there is any voltage fluctuation, it rectifies to the desired level in few seconds.

The basic purpose of AVC is to maintain the desired voltage and to reduce the breakdown of electrical equipments due to low/high voltage. Power saving and reduction in MDI and improvement of P.F. will be added advantage at high voltage.

Capital & interest cost is just 1.5% per month.

Saving by reduction in breakdown of electrical equipment and energy saving shall be 4-8 times of capital & interest cost per month.

Voltage variation is common phenomenon. The input voltage is generally low during day time and high during night hours.

Apart from above, few months in a year / few days in a month / few hours in a day the voltage is either low or high due to the following reasons:

● **Holidays** ● **Peak Hours** ● **Rainy Days** ● **Agricultural Load** ● **Weather Conditions etc.**

Therefore for smooth function, it is suggested to install AVC with  $\pm 15\%$  or 20% input voltage variation range i.e. 340-460 volts or 320-480 model.

In India all electrical equipments are designed for 230 / 400 volts single / three phase. After installation of Automatic Voltage Controller you will have the following Advantages:

## High Voltage

Voltage Variation	% Reduction possible in breakdown of Electrical Equipments with AVC		% Power saving possible with AVC	
	Motors Below 10 HP	Lighting load	Motors Below 10 HP	Lighting load
380-400 V	No Reduction and No AVC required		No Reduction and No AVC required	
400-420 V	5%	10%	3%	5%
420-440 V	10%	20%	5%	10%
440-460 V	20%	40%	7%	20%
460-480 V	40%	80%	10%	30%

**Suggestion:** It is suggested to note down hourly input voltage by installing digital voltmeter at the security gate of your factory premises for a week.

**Check:** Failure rate of Electrical Equipments such as Bulbs, Tubes, Chokes, Contactor Coil & Electronic Equipments etc.

## Low Voltage

- At low voltage you will not be able to operate your machines at rated capacity resulting in lower production.
- You need to run the machines on DG set. The power cost of DG set is three times as compared to charge by electricity board.



Inner view of  
3500 KVA Stabilizer

### Advantages of Automatic Voltage Controller with Linear Regulator Contact Carbon Roller Assembly

- Power consumption is below 0.5 to 1.5% depending upon the input voltage range
- Life at full load is more than 15 years
- One year Guarantee against manufacturing defect
- Economical for continuous / industrial load above 100 KVA
- **JINDAL'S** AVC are heavy duty & suitable for 100% load, so it is advisable to install as per running load / MDI / load expansion



**JINDAL'S 1 Year  
Unconditional Guarantee  
against manufacturing defect**

### Specifications



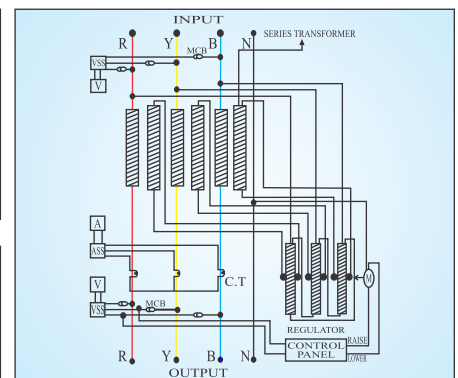
Carbon Roller Assembly



Carbon Roller



Tag & Tail



Basic Circuit

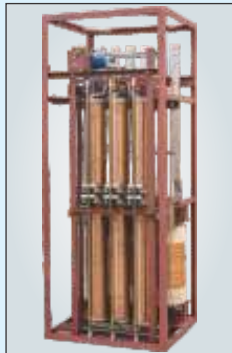
### AVC's Application

- |                        |                           |                                    |
|------------------------|---------------------------|------------------------------------|
| ◆ Cement Plant         | ◆ Paper Mills             | ◆ Footwear & Leather Units         |
| ◆ Flour Mills          | ◆ Tube Mills              | ◆ Distilleries & Beverages         |
| ◆ Engineering Units    | ◆ Rice Shellers           | ◆ Hospitals & Nursing Homes        |
| ◆ Pharmaceutical Units | ◆ Rubber Industries       | ◆ Hotels/Restaurants/Clubs         |
| ◆ Cold Storage         | ◆ Tea Estates             | ◆ Educational Institutions         |
| ◆ Rolling Mills        | ◆ Food Processing Units   | ◆ Residential Apartments/Buildings |
| ◆ Textiles Mills       | ◆ Oil and Vanaspati Plant | ◆ Mall & Multiplex                 |

## Comparison of Automatic Voltage Controller

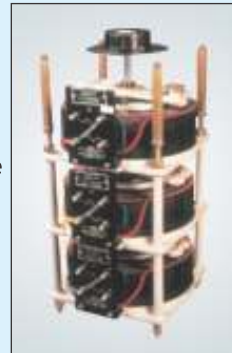
### Linear Regulator Rolling Contact Carbon Roller Assembly

- Power consumption is below 0.5 to 1.5% depending upon the input voltage range
- Suitable for 100% duty cycle
- Life at full load is more than 15 years
- One year guarantee



### Dimmer Regulator sliding contact carbon brush assembly

- Power consumption is above 2 to 7% depending upon the input voltage range
- Suitable for less than 50% duty cycle
- Life at full load is less than 3 years
- One year warranty



## Advantages of Automatic Voltage Controller

**JINDAL'S** AVC resolves 99% of voltage problems automatically, and ensures steady voltage supply round the clock. Some key advantages of installing an AVC are:

- Up to 80% Reduction in Breakdown of Electrical Equipment
- 5%-10% Savings in Electricity Costs
- Enhanced Productivity of Plant
- Uniform Quality of End Product
- Reduction in MDI (Peak Demand)
- Improvement in Power Factor
- 40% Depreciation as per Income Tax Act in India (Being an energy saving device)

**The above advantages have been confirmed by the customers by placing repeat orders for their expansion of plants.**

### Pay Back

**JINDAL'S** AVC not only stabilizes incoming voltage fluctuations, but in the process also helps save energy upto 5%-10% and reduce breakdowns upto 80%. It ensures continuity in production and consistency in quality despite incoming voltage variations. Owing to its high efficiency and associated benefits, the pay-back period for the cost of our AVC is typically between 6 to 18 months, depending upon the nature and duration of load and the extent of voltage variation. And more often than not, it is simply avoiding a few hours of machine downtime or just one failure to recover the cost of the equipment.

### Some of our Valuable Clients using JINDAL'S Automatic Voltage Controller

Today, JINDAL'S has become a name to reckon with in the field of Automatic Voltage Controller, all bearing **JINDAL'S** stamp of Reliability and Trust that it shares with some of the top Indian and Multi National Companies.

Aarti	Avon Cycles	Fortis Hospitals	HUL	LML	Omax Auto	Tata Group
ABB	Bajaj Auto	HCL	Hyatt	L&T	Pepsi	Thapar Group
Adani	Brakes India	Hero Cycles	Idea	Lloyed	Ranbaxy	Vodafone
Airtel	Coca Cola	Hindalco Industries	Indian Oil	LPU	Shri Ram Pistons	Whirlpool
Apeejay	Cummins	Hero Honda Motors	Infosys	Mahindra	Sterling Tools	Vijay Electricals
Areva	Escorts	Hitachi	ITC	Minda	Taj Group of Hotels	Yamaha Motors, etc.

### Also Manufacturer of Special Purpose Transformers / Isolation Transformers, AC Variable Supplies & Rectifier

For any Further Details or Enquiries, Please Call or Contact:



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UNIT II



#### JINDAL ELECTRICALS

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♦ Also we are having our Sales and Service Engineers on PAN India basis